

SEQUENCE\_LISTING.txt  
SEQUENCE LISTING

<110> Rice University  
Stewart, Charles R.  
Shamoo, A. Yousif  
<120> Anti-Microbial Proteins from the SPO1 Bacteriophage  
<130> 61683-00004USPT  
<150> 60/357780  
<151> 2002-02-19  
<160> 24  
<170> PatentIn version 3.2  
<210> 1  
<211> 31  
<212> PRT  
<213> SPO1 Bacteriophage  
<400> 1

Met Ser Asp Val Ile Ile Pro Phe Leu Thr Ser Ala Val Thr Ala Phe  
1 5 10 15

Ile Val Ala Tyr Leu Leu Asp Arg Trp Tyr Ile Lys Arg Arg Arg  
20 25 30

<210> 2  
<211> 190  
<212> PRT  
<213> SPO1 Bacteriophage

<400> 2

Met Ser Val Gln Ile Lys His Gly Asn Lys Thr Phe Val Val Asp Pro  
1 5 10 15

Ser Gly Asp Val Lys Glu Gly Ser Tyr Val Leu Tyr Leu Tyr Glu Tyr  
20 25 30

Arg Leu Gly Glu Val Asp Val Gly Arg Val Ser Glu Val Ala Asn Asp  
35 40 45

Gly Arg Leu Tyr Leu Asp Gly Pro Gly Val Ile Val Thr Leu Asp Gln  
50 55 60

Pro Phe Ile Leu Leu Lys Glu Val Val Glu Glu Glu Asp Glu Asp  
65 70 75 80

Asp Arg Ile Asp Ala Glu Phe His Asn Asp Pro Leu Leu Arg Lys Leu  
85 90 95

SEQUENCE\_LISTING.txt

Glu Asn Thr Thr Glu Lys Leu Thr Pro Glu Glu Thr Gln Leu Ala Gln  
100 105 110

Trp Thr Thr Met Thr Arg Val Phe Ser His Asp Leu Lys Lys Gly Ile  
115 120 125

Pro Tyr Ala Ile Lys His Lys Asn Ser Gly Asn Ile Leu Tyr Gly Leu  
130 135 140

Tyr Ser Gly Leu Leu Asn Pro Val Thr Ala Leu Phe Arg His Leu Asn  
145 150 155 160

Glu Glu Ser Lys Ile Ser Ile Glu Gln Leu Lys Ser Gly Leu Ile Glu  
165 170 175

Ile Tyr Glu Val Val Glu Asp Glu Glu Glu Ser Ile Trp Asn  
180 185 190

<210> 3  
<211> 255

<212> PRT

<213> SPO1 Bacteriophage

<400> 3

Met Glu Leu Asn Leu Asp Ile Tyr Val Asp Tyr Lys Asp Lys Arg Tyr  
1 5 10 15

Lys Ala Glu Gly Tyr Tyr Gly Pro Ser Val Gly Asp Leu Val Leu Ile  
20 25 30

Phe Met Asp Met Glu Leu Glu Gly Ala Thr Val Gln Glu Val Ala Arg  
35 40 45

Ile Glu Gly Ser Glu Ile His Leu Arg Thr Pro Asn Gly Asn Glu Pro  
50 55 60

Ser Tyr Arg Tyr Met Gly Gln Tyr Leu Ile Leu Lys Pro Tyr Gly Ser  
65 70 75 80

Ser Asp Pro Arg Gly Asp Ile Leu Val His Glu Asp Val Gln Tyr Val  
85 90 95

Arg Val Asp Ala Gln Ala Met Pro Gly Asp Leu Ile Glu Ala Leu Glu  
100 105 110

Pro Asn Lys Leu Pro Phe Ser Gly Lys Arg Phe Lys Tyr Arg Pro Ala  
115 120 125

SEQUENCE\_LISTING.txt

Val Leu Glu Val Glu Tyr Val Leu Thr Lys Asp Glu Gln Val Leu Gln  
130 135 140

Leu Glu Asn Gly Lys Ser Tyr Ser Gly Ala Tyr Arg Val Leu Ile Pro  
145 150 155 160

Arg Met Gly Val Leu Pro Pro Lys Thr His Ile Tyr Thr Thr His Lys  
165 170 175

His Val Phe Met Glu Asp Val Phe Val Leu Gly Asn Ser Tyr Glu Leu  
180 185 190

Ser Ser Pro Asn Asp Val Glu Met Thr Pro Ile His Ala Val Phe Thr  
195 200 205

Gly Phe Ser Lys Asn Arg Asp Glu Ala Ile Phe Val Asn Pro Tyr Tyr  
210 215 220

Asn Asp Asp Gly Val Thr Gly Thr Met Ile Thr Val Ser Asp Leu Leu  
225 230 235 240

Thr Gly Lys Trp Asp Ile Thr Pro Leu Val Pro Lys Lys Gly Val  
245 250 255

<210> 4  
<211> 350  
<212> PRT  
<213> SP01 Bacteriophage

<400> 4

Met His Ile Tyr Thr Tyr Trp Gly Leu Lys Tyr Val Pro Ser Asn Ser  
1 5 10 15

Thr Met Val Ala Lys Glu Gly Asp Leu Ile Leu Leu Gly Asn Glu Val  
20 25 30

His Lys Val Val Lys Val Leu His Arg Phe Arg Asn Ile Thr Asp Leu  
35 40 45

Gln Ile Thr Asn Trp Lys Gly Thr Glu Thr Arg Tyr Asn Leu His Val  
50 55 60

Thr Glu Tyr Lys Val Leu Val Pro Tyr Asp Thr His Lys Glu Glu Asn  
65 70 75 80

Glu Ala Met Ser Asp Ser Leu Ile Thr His Asn Gly Lys Asp Tyr Val  
85 90 95

SEQUENCE\_LISTING.txt  
Leu Cys Lys Ile Pro Ala Arg Val 100 Gly Asp Leu Ile Arg Thr Glu Asp 105 110  
Lys Arg Val Trp Glu Val Leu Gln 115 Lys Ser Lys Asp Gly Leu Val Leu 120 125  
Tyr Asn Glu Glu Lys Gly Glu 130 Gln Arg Ser Ala Val Tyr Ser Glu Ile 135 140  
Gly Pro Tyr His Val Leu Val 145 Pro Arg Asp Thr Asp Thr His Thr Pro 150 155 160  
Thr Arg Glu Glu Leu Ala Ala Val Ile Met Asn Lys Ala Phe Thr Arg 165 170 175  
Thr Glu Thr Gln Asp Ser Gln Glu Asp Thr Gly Thr His Lys Gly Leu 180 185 190  
Gly Leu Thr Gly Thr Asp Leu Tyr His Ser Leu Arg Asp Leu Asp Ala 195 200 205  
Lys Val Gln Ser Gly Tyr Tyr 210 Thr Ala Thr Glu Asn Glu Glu Asp Val 215 220  
Lys Ser Glu Ile Glu Ala Thr Lys Lys His Met Lys Ala Val Lys Glu 225 230 235 240  
Ser Gly Lys Thr Val Asn Asp Tyr Arg Lys Glu Glu Asn Thr Lys Arg 245 250 255  
Cys Lys Leu Lys Ala Leu Thr Asn Lys Phe Asn Arg Leu Phe Leu Lys 260 265 270  
Ser Val Ile Asp Thr Asp Ser Leu Gln Val Gly Lys Ala Tyr Leu Ile 275 280 285  
Gly Gly Arg Asp Met Lys Asn Val His Gly Leu Tyr Thr Gly Thr Thr 290 295 300  
Phe Asp Gln Gln His Ala Asn Phe Leu Ile Val Glu Thr Asp Arg Met 305 310 315 320  
His Arg Thr Leu Thr Val Ser Ala Glu Gln Leu Phe Ala Glu Glu Arg 325 330 335  
His Ile Val Asp Ile Glu Lys Arg Val Glu Gln Thr Glu Asp 340 345 350

SEQUENCE\_LISTING.txt

<210> 5  
<211> 154  
<212> PRT  
<213> SP01 Bacteriophage

<400> 5

Met Glu Lys Leu Pro Asn Thr Val Val Lys Val His Gly Glu Gly Met  
1 5 10 15

Glu Ser Lys Leu Phe Pro Arg Lys Leu His Lys Asp Thr Asn Ser Ile  
20 25 30

Leu Arg Glu Asp Leu Val Ser Ala Cys Gln Glu His Ile Glu Ala Leu  
35 40 45

Val Glu Gly Met Ile Ala His Gly Asp Gly Arg Lys Val Ala Glu Leu  
50 55 60

Asp Thr Ser Thr Gln Tyr Tyr Trp His Leu Lys Leu Val Glu Tyr Thr  
65 70 75 80

Pro Ile Pro Gly Arg Thr Gln His Tyr Val Asp Leu Val Asp Gly Thr  
85 90 95

Asn Pro Asp Val Cys Tyr Phe Ser Leu Cys Asp Cys Ser Gly Asp Asn  
100 105 110

Ile Thr Asp Arg Arg Trp Ser Asn Met Val Lys Arg Leu Gln Asn Pro  
115 120 125

Glu Glu Asp Ile Ala Lys Thr Leu Arg Cys Tyr Phe Arg Gln Asp Ala  
130 135 140

Gly Met Pro Ser Trp Ile Glu Tyr Pro Gln  
145 150

<210> 6  
<211> 88  
<212> PRT  
<213> SP01 Bacteriophage

<400> 6

Met Arg Lys Phe Val Thr Thr Leu Thr Ala Ser Pro Arg Asn Lys Lys  
1 5 10 15

Val Gly Asn His Arg Leu Glu Ile Ser Pro Phe Val Ser Leu Arg Arg  
20 25 30

SEQUENCE\_LISTING.txt

Tyr Tyr Tyr Phe Asn Thr Ala Ile Cys Ile Glu Asn Pro Val Thr Arg  
35 40 45

Glu Phe Ala Ile Asp Asp Ser Tyr Gly Ser Leu Ser Thr Asn Gln Asn  
50 55 60

Cys Ala Gln Tyr Arg Gln Tyr Phe Ser Leu Gly Gly Tyr Lys Glu Val  
65 70 75 80

Ser Leu Glu Glu Ile His Ala Val  
85

<210> 7

<211> 90

<212> PRT

<213> SP01 Bacteriophage

<400> 7

Met Ile Gln Leu Ser Glu Arg Gln Gln Asp Leu Leu Gln Val Ala Glu  
1 5 10 15

Lys Tyr Glu Gln Cys His Ile Glu Phe Tyr Thr Ala Gln Ser Arg Leu  
20 25 30

Phe Gly Thr Glu Ile Met Gly Glu Val Val Lys Thr Ser Leu Gly Thr  
35 40 45

Leu Lys Ile Ala His Pro Glu Glu Asp Leu Phe Glu Val Ala Leu Ala  
50 55 60

Tyr Leu Ala Ser Lys Lys Asp Ile Leu Thr Ala Gln Glu Arg Lys Asp  
65 70 75 80

Val Leu Phe Tyr Ile Gln Asn Asn Leu Cys  
85 90

<210> 8

<211> 237

<212> PRT

<213> SP01 Bacteriophage

<400> 8

Met Ala Lys Ser Asn Asn Val Tyr Val Val Asn Gly Glu Glu Lys Val  
1 5 10 15

Ser Thr Leu Ala Glu Val Ala Lys Val Leu Gly Val Ser Arg Val Ser  
20 25 30

Lys Lys Asp Val Glu Glu Gly Lys Tyr Asp Val Val Val Glu Glu Ala  
Page 6

35

SEQUENCE\_LISTING.txt  
40 45

Ala Val Ser Leu Ala Asp Thr Glu Glu Val Val Glu Glu Val Val Thr  
50 55 60

Glu Glu Glu Asp Ile Leu Glu Gly Val Glu Val Val Glu Asp Glu Glu  
65 70 75 80

Glu Glu Glu Ala Ala Glu Asp Val Glu Glu Pro Thr Ser Glu Glu Asp  
85 90 95

Ser Glu Asp Glu Trp Glu Glu Gly Tyr Pro Val Ala Thr Glu Val Glu  
100 105 110

Glu Asp Glu Asp Glu Glu Ile Glu Tyr Pro Glu Val Gly Asp Phe Glu  
115 120 125

Asp Glu Lys Ala Ile Lys Lys Tyr Ile Lys Gly Leu Thr Asp Glu Gln  
130 135 140

Leu Gln Ala Trp Cys Glu Leu Glu Gly Ala Glu Trp Val Glu Asn Glu  
145 150 155 160

His Arg Asn Ile Asn Arg Met Arg Met Ala Met Ala Ile Lys Ala Val  
165 170 175

His Phe Pro Glu Leu Ala Lys Lys Pro Ser Ser Lys Lys Ser Lys  
180 185 190

Tyr Ala Glu Tyr Thr Thr Glu Glu Leu Val Glu Met Ala Ile Asp Asn  
195 200 205

Asn Val Glu Val Arg Asp Asp Lys Gly Asn Glu Arg Ile Leu Arg Met  
210 215 220

Tyr Thr Ile Ile Ala Leu Arg Glu Ala Gly Leu Ile Ser  
225 230 235

<210> 9

<211> 99

<212> PRT

<213> SP01 Bacteriophage

<400> 9

Met Met Met Asp Lys Gln Val Glu Glu Val Lys Lys His Tyr Pro Ile  
1 5 10 15

Val Glu Asp Trp Ser Val Ile Val Ala Arg Lys Glu Asp Asp Cys Met  
Page 7

20

SEQUENCE\_LISTING.txt  
25 30

Thr Val Thr Asp Ala Val Pro Phe Ile Leu Ala Gly Tyr Lys Asn Val  
35 40 45

Ser Tyr Glu Met Asp Asp Ile Val Val Leu Cys Ser Glu Pro Ile Gly  
50 55 60

Leu Thr Trp Glu Asp Val Arg Phe Leu Lys Asn His Glu Gly Ser Val  
65 70 75 80

Ser Phe Glu Glu Ile Gly Tyr Glu Asp Lys Ala Met Val Tyr His Val  
85 90 95

Asp Leu Gly

<210> 10

<211> 77

<212> PRT

<213> SPO1 Bacteriophage

<400> 10

Met Met Thr Glu Asp Gln Lys Phe Lys Tyr Leu Thr Lys Ile Glu Glu  
1 5 10 15

Leu Glu Ala Gly Cys Phe Ser Asp Trp Thr Lys Glu Asp Ile Thr Gly  
20 25 30

Asp Leu Lys Tyr Leu Lys Gly Ile Ile Glu Glu Ser Ile Glu Leu  
35 40 45

Ile Arg Ala Val Asn Gly Leu Thr Tyr Ser Glu Glu Leu His Asp Phe  
50 55 60

Thr Gln Glu Ile Ile Glu Glu Leu Asp Ile Ser Pro Leu  
65 70 75

<210> 11

<211> 94

<212> PRT

<213> SPO1 Bacteriophage

<400> 11

Met Asp Trp Thr Lys Met Thr Phe Met Gly Thr Val Asp Glu Val Lys  
1 5 10 15

Glu Ile Trp Asn Gly Leu Glu Glu Ala Gly Arg Leu Tyr Ala Val Trp  
20 25 30

SEQUENCE\_LISTING.txt

Leu Ser Asp Asp His Val Tyr Gly Ile Val Asp Val Asn Glu Glu Gly  
35 40 45

Leu Phe Cys Leu Gly Trp Val Ser Asp Ile Ser Pro Glu Ser Leu Gln  
50 55 60

Asn Met Leu Gly Gly Ala Glu Leu Phe Glu Ser Tyr Glu Asp Val  
65 70 75 80

Leu Ser Glu His Gly Gly Ser Ile Ala Ile Arg Val Glu Val  
85 90

<210> 12

<211> 126

<212> PRT

<213> SP01 Bacteriophage

<400> 12

Met Pro Tyr Ser Lys Ile Thr Val Pro Val Leu Val Gly Glu Gly Leu  
1 5 10 15

Thr Glu Trp Asp Val Ile Asp Val Met Arg Glu Thr His Pro Pro Thr  
20 25 30

Val Glu Asp Gln Tyr His Tyr His Thr Phe Asp Ser Met Gln Asn Arg  
35 40 45

Thr Ile Phe Val Leu Glu Asn Pro Leu Tyr Pro Asp Val Asp Lys Ile  
50 55 60

Pro Glu Lys Val Leu Gly Ile Ala Val Asp Ala Leu Glu Asp Met Leu  
65 70 75 80

Asp Asn Val Pro Val Glu Asp Leu Pro Val Thr Glu Glu Gln Gly Asn  
85 90 95

Val Lys Arg Phe Thr Thr Lys Leu Ala Ser Ile Val Phe Asp Val Phe  
100 105 110

Leu Ile Ile Pro Asp Phe Val Ser Val Thr Ala Lys Glu Glu  
115 120 125

<210> 13

<211> 117

<212> PRT

<213> SP01 Bacteriophage

<400> 13

SEQUENCE\_LISTING.txt

Met Ile Lys Ala Ala Val Thr Lys Glu Ser Leu Tyr Arg Met Asn Thr  
1 5 10 15

Leu Met Glu Ala Phe Gln Gly Phe Leu Gly Leu Asp Leu Gly Glu Phe  
20 25 30

Thr Phe Lys Val Lys Pro Gly Val Phe Leu Leu Thr Asp Val Lys Ser  
35 40 45

Tyr Leu Ile Gly Asp Lys Tyr Asp Asp Ala Phe Asn Ala Leu Ile Asp  
50 55 60

Phe Val Leu Arg Asn Asp Arg Asp Ala Val Glu Gly Thr Glu Thr Asp  
65 70 75 80

Val Ser Ile Arg Leu Gly Leu Ser Pro Ser Asp Met Val Val Lys Arg  
85 90 95

Gln Asp Lys Thr Phe Thr Phe Thr His Gly Asp Leu Glu Phe Glu Val  
100 105 110

His Trp Ile Asn Leu  
115

<210> 14  
<211> 23  
<212> PRT  
<213> SP01 Bacteriophage

<400> 14

Met Asp Lys Leu Ala Ala Gly Gly Leu Tyr Leu Leu Phe Leu Leu Leu  
1 5 10 15

Ala Gly Ile Ile Val Thr His  
20

<210> 15  
<211> 131  
<212> PRT  
<213> SP01 Bacteriophage

<400> 15

Met Ala Lys Ile Asn Lys Gly Tyr Val Ala Asn Phe Ile Glu Glu Asn  
1 5 10 15

Gly Phe Pro Glu Gln Gly His Phe Glu Glu Lys Lys Asp Leu Gln Ala  
20 25 30

SEQUENCE\_LISTING.txt  
Phe Tyr Lys His Leu Ser Thr Glu Gln Leu Glu Glu Trp Val Glu Leu  
35 40 45  
  
Glu Gly Leu Glu Val Lys Asp Thr Asp Ser Asp Ser Ile Tyr Arg Met  
50 55 60  
  
Arg Leu Cys Met Ala Ile Leu Tyr Leu Asn Phe Pro Lys Lys Thr Ala  
65 70 75 80  
  
Gly Lys Lys Lys Ala Ser Pro Tyr Lys His Ile Ser Leu Glu Glu Leu  
85 90 95  
  
Val Gln Met Ala Thr Asp Asn Asp Ile Glu Val Lys His Thr Asp Ser  
100 105 110  
  
Asp Lys Ile Leu Arg Met Arg Thr Ile Met Ala Leu Lys Glu Ala Gly  
115 120 125  
  
Lys Leu Gly  
130  
  
<210> 16  
<211> 158  
<212> PRT  
<213> SPO1 Bacteriophage  
  
<400> 16  
  
Met Thr His Phe Ile Ser Ile Ala Thr Tyr Ile Tyr Ala Leu Val Ser  
1 5 10 15  
  
Ala Gly Phe Ile Gly Gly Trp His Asp Glu Glu Ser Trp Ile Lys Asp  
20 25 30  
  
Thr Glu Tyr Glu His Gly Gly Tyr His Met Ile Ile Asp Thr Pro Ala  
35 40 45  
  
Val Val Asn Tyr Ser Leu Glu Tyr Gly Asn Tyr Gln Trp Ile Phe Gln  
50 55 60  
  
Lys Tyr Met Lys Glu Gly Lys Val Thr Val Glu Arg Phe Tyr Arg Asn  
65 70 75 80  
  
Ser Leu Asp Ile Pro Lys Glu Ile Leu Thr Asp Glu Ala Leu Ala Phe  
85 90 95  
  
Ile Lys Asp Trp Asp Glu Asn Ala Asn Glu Tyr Glu Leu His Ala Gly  
100 105 110

## SEQUENCE\_LISTING.txt

Glu Gly Val Leu Tyr Phe Lys Tyr Glu Gly Glu Glu Lys Gly Tyr Val  
 115 120 125

Ile Pro Met Ala Tyr Ala Gly Glu Ile Met Phe Val Pro Asp Glu Asp  
 130 135 140

Ala Glu Lys Ala Leu Glu Ile Ile Asn Ser Gln Lys Lys Tyr  
 145 150 155

<210> 17  
 <211> 218  
 <212> PRT  
 <213> SP01 Bacteriophage

<400> 17

Met Arg Thr Tyr Trp Asn Val Ser Leu Asp Arg Ser Asn Gly Lys Arg  
 1 5 10 15

Phe Glu Arg Leu Val His Tyr Ile Cys Val Pro Ile Ile Ser Ile His  
 20 25 30

His Ala Glu Asp Thr Ile Ser Met Thr Arg Lys Glu Val Gly His Leu  
 35 40 45

Ala Glu Thr Ile Ala Asn His Ile Ile Leu Asp Ile Asn Gly Thr Tyr  
 50 55 60

Arg Thr Phe Ser Val Asn Asp Ile Val His Cys Ser Leu Glu Lys Val  
 65 70 75 80

Ile Thr Leu Glu Gly Asp Val Thr Asn Glu Phe Ile Asp Arg Leu Gln  
 85 90 95

Ile Leu Val Asn Lys Glu Val Gln Gly Ser Gln Ser Thr Gln Gln Ser  
 100 105 110

Leu Ser Ser Val Phe Glu Ser Thr Leu Glu Lys Tyr Asn Ser Pro Asp  
 115 120 125

Asp Phe Ala Asp Tyr Leu Glu Glu Thr Glu Glu Val Asp Tyr Glu  
 130 135 140

Asp Tyr Ser Leu Asp Asp Thr Ile Asp Ala Ile Ser Tyr Ala Leu Lys  
 145 150 155 160

Thr Gln Glu Pro Val Gln Ala Glu Trp Cys Leu Leu Met Val Asp Val  
 165 170 175

## SEQUENCE\_LISTING.txt

Thr Leu Asp Ser Ile Leu Gly Lys Tyr Leu Glu Asn Gly Phe Glu Cys  
195 200 205

Val Ser Lys Lys Arg Leu Gly Glu Val Leu  
210 215

<210> 18  
<211> 46

<211> 46  
<212> RBT

<212> PRT  
<213> SPOV

### <213> SP01 Bacteriophage

<400> 18

Met Val Ile Ile Lys Tyr Thr Thr Lys Thr Gln Pro Thr Pro Val Lys  
1 5 10 15

Gly Ser Lys Leu Thr Ser Val Lys Pro Ile Lys Gly Gly Arg  
35 40 45

<210> 19  
<211> 40

<211> 40  
<212> RPT

<212> PRI  
<213> SBO

<213> SP01 Bacteriophage

<400> 19

Met Phe Lys Leu Leu Thr Leu Phe Lys Arg Asn Lys Ile Thr Ser Ala  
1 5 10 15

Glu Glu Tyr Tyr Thr Gln Ala Ile His Ile Cys Glu Gln Phe Asp Arg  
20 25 30

Ser Thr Gln Lys Tyr Thr Ser Met  
35 40

<210> 20  
<211> 70

<211> 79  
<212> PBT

212 PRI  
213 SPOT

## 213. SPOT Bacter Toppage

<400> 20

Met Phe Lys Tyr Thr Asp Arg Ser Val Arg Gln Tyr Ile Glu Arg Gln  
1 5 10 15

Gln Arg Ser Ala Met Leu Glu Gln Glu Gln Ala Glu Lys Asp Lys Lys  
20 . 25 . 30  
Page 13

SEQUENCE\_LISTING.txt

Glu Arg Arg Lys Ala Gly Leu Leu Phe Phe Gly Thr Ile Val Val Leu  
35 40 45

Val Ala Val Val Ala Val Tyr Ile Val Pro Gln Ser Leu Asp Ala Met  
50 55 60

Trp His Glu Asn Tyr Glu Lys Pro Ala Gln Glu Ala Ala Arg Asn  
65 70 75

<210> 21  
<211> 113  
<212> PRT  
<213> SP01 Bacteriophage

<400> 21

Met Thr Leu Phe Ile Ala Gly Val Thr Leu Glu Glu Val Arg Glu Ala  
1 5 10 15

Thr Val Ser Ala Leu Phe Val Lys Leu Glu Gln Glu Lys Lys Ala Leu  
20 25 30

Tyr Leu Gly Ala Gly Ser Glu Asp Ser Leu Asn Leu Cys Lys Ser Thr  
35 40 45

Leu Asp Lys Val Gln Glu Asp Tyr Pro Leu Asp Asp Met Glu Lys Asp  
50 55 60

Tyr Leu Arg Asp Leu Leu Gln Phe Trp Leu Ser Arg Leu Phe Leu Gly  
65 70 75 80

Asp Gly Phe Glu Gly Glu Ile Pro Asp Ser Ser Glu Asp Leu Arg Arg  
85 90 95

Thr Ala Thr Thr Ala Phe Thr Tyr Thr Ala Ala Ile Arg His Tyr Cys  
100 105 110

Met

<210> 22  
<211> 35  
<212> PRT  
<213> SP01 Bacteriophage  
<400> 22

Met Thr Leu Ala Gly Tyr Arg Val Asp Ser Cys Asn Gly Cys Gly Lys  
1 5 10 15

SEQUENCE\_LISTING.txt

Ala Tyr Leu Val Gly Glu Ser His Asp Arg Lys Lys Cys Ala Glu Cys  
20 25 30

Ala Ser Lys  
35

<210> 23  
<211> 56  
<212> PRT  
<213> SPO1 Bacteriophage

<400> 23

Met Lys Lys Arg Tyr Lys Val Thr Ala Leu Phe Glu Asp Gly Thr Ser  
1 5 10 15

Gln Cys Leu Val Val Gly Asn Phe Ser Ser Pro Thr Asn Ala Trp Cys  
20 25 30

Ala Ala Met Arg Asn Leu Thr Pro Glu Gly Ile Ala Arg Val Gln His  
35 40 45

Tyr Asn Val Glu Glu Ile Ser Lys  
50 55

<210> 24  
<211> 72  
<212> PRT  
<213> SPO1 Bacteriophage

<400> 24

Leu Asn Gln Val Glu Val Leu Arg Glu Glu Tyr Val Glu Gly Tyr Val  
1 5 10 15

Val Gln Met Trp Arg Arg Asn Pro Ser Asn Ala Pro Val Ile Glu Val  
20 25 30

Phe Thr Glu Asp Asn Leu Glu Glu Gly Ile Ile Pro Glu Tyr Val Thr  
35 40 45

Ala Asn Asp Asp Thr Phe Asp Arg Ile Val Asp Ala Val Glu Phe Gly  
50 55 60

Tyr Leu Glu Glu Leu Glu Leu Val  
65 70